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Award Number: W81XWH-12-2-0095

TITLE: Multimodal Retrospective and Prospective Unit-Level Analysis of Military  
Workplace Violence

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CONTRACTING ORGANIZATION: RTI International

REPORT DATE: October 2013

TYPE OF REPORT: Annual Report

PREPARED FOR: U.S. Army Medical Research and Materiel Command  
Fort Detrick, Maryland 21702-5012

DISTRIBUTION STATEMENT: Approved for Public Release;  
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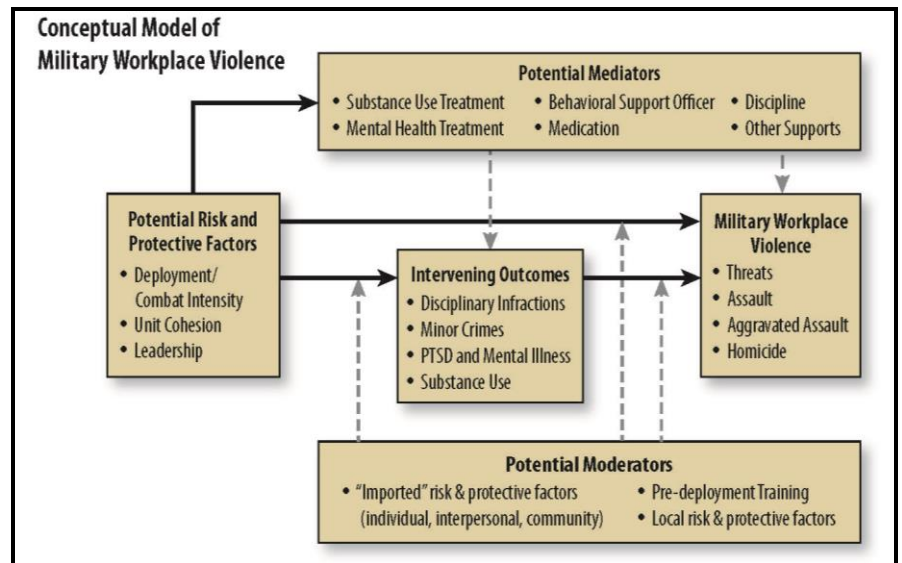
REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
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1. REPORT DATE 01 October 2013		2. REPORT TYPE Annual Report		3. DATES COVERED 30 Sept 2012 – 29 Sept 2013	
4. TITLE AND SUBTITLE Multimodal Retrospective and Prospective Unit-Level Analysis				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER W81XWH-12-2-0095	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Dr. Pamela K. Lattimore  E-Mail: Lattimore@rti.org				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)  RTI International  Research Triangle Park, NC 27709				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Army Medical Research and Materiel Command Fort Detrick, Maryland 21702-5012				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for Public Release; Distribution Unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT  Work focused on four major activities during the first study year. First, IRB and human subjects approval were obtained from the NHRC, RTI, and USAMRMC. Second, an exhaustive literature review was conducted resulting in the identification and subsequent acquisition of more than three thousand journal articles relevant to the socio-ecological framework for the study of the factors correlated with violence perpetration by active duty and reserve service members; work began to draft a journal manuscript summarizing the current state of knowledge and describing our framework. Second, construction of the retrospective data base was begun. CHAMPS data for approximately 1.9 million soldiers and marines who were on active duty between 2000 and 2012 were acquired for the study by NHRC and cleaning and processing of these data began. In addition, requests and supporting materials were submitted to obtain other administrative data for the study, including the Defense Incidence Based Reporting System crime data and the PDHA and PDHRA data. We expect to receive these data early in year 2 of the study. Third, work began on the instrument for the prospective survey and a draft has been completed. Fourth, outreach to the six military installations proposed the prospective study was initiated.					
15. SUBJECT TERMS Military workplace violence					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			USAMRMC
U	U	U	UU	5	19b. TELEPHONE NUMBER (include area code)

## Introduction

More than a decade of war characterized by multiple deployments and intense combat exposure has increased concerns about US service members' behavioral health, risk-taking behaviors, disciplinary and criminal actions, and targeted acts of violence including homicide.

The Multimodal Retrospective and Prospective Study of Military Workplace Violence (MWV) is using complementary retrospective and prospective studies to identify static and dynamic predictors of targeted violence in the US military workplace. The research will identify factors that increase and mitigate risk of military workplace violence (MWV) at individual, unit and installation levels to inform prevention and interventions and will offer concrete recommendations to reduce risk and increase protective factors. The research is being conducted by RTI International in cooperation with the Naval Health Research Center (NHRC).

The conceptual model shows a framework within which **risk and protective factors** lead to targeted **MWV** directly and indirectly through **intervening outcomes** that in turn also may lead to and, thus, serve as potential predictors of MWV. These intervening outcomes include PTSD and other mental health issues, substance abuse, disciplinary infractions, and criminal acts. These linkages may be **mediated** by preventive efforts (e.g., predeployment stress inoculation training for primary prevention of combat-related stress disorders) and by timely and appropriate intervention including substance abuse and mental health treatment, as well as support in theater and upon reentry. The effects of deployment may be **moderated** by individual characteristics, as well as by military training and support.



The research hypotheses, specified in the conceptual model, are:

1. Deployment characteristics, including number of deployments and combat intensity, will increase MWV;
2. Disciplinary infractions, minor crimes, PTSD and other mental problems, and substance abuse will increase MWV;
3. Treatment and social support will mediate the relationships among deployment characteristics, intervening outcomes, and MWV; and
4. Individual and family/peer risk and protective factors and training will moderate the relationships between deployment, intervening outcomes, and MWV.

The retrospective study entails the acquisition and analysis of administrative data from multiple sources that will be combined and analyzed to test the research hypotheses. The retrospective study is obtaining, merging, and analyzing secondary data from the Defense Manpower Data Center (DMDC) for soldiers and marines who were on active-duty between 2001 and 2012. These data describe background characteristics, deployment histories, intervening outcomes (e.g., infractions, minor crimes, PTSD and mental illness, substance use, and

risk behaviors), training and support, and violence incidents of service members. The team will analyze these data to test the research hypotheses and generate recommendations.

The prospective study will entail two rounds of anonymous surveys with members of randomly selected companies at four United States Army Bases (Fort Bragg, Fort Carson, Fort Hood, and Joint Base Lewis McCord) and two United States Marine Corps installations (Camp Lejeune and Camp Pendleton). Survey content will consist of measures of key risk and protective factor, potential mediators and moderators of MWV, measures of intervening and MWV outcomes, and backgrounds characteristics (e.g., education, gender, and age). The study team will administer paper-and-pencil surveys during on-base visits. The total time for survey administration, including introduction of the study, review of consent, and completing the survey, will be about 1 hour. Each participating company will be provided with a gift (\$250 equivalent) as appreciation for their support. In addition, we will provide small promotional items (e.g., key chain flashlights) to those asked to participate in the survey.

## **Key Research Accomplishments**

**Human Subjects:** During the first year of the project, the study team prepared and submitted materials to the NHRC and RTI Institutional Review Boards, receiving approval for the Retrospective Study in December 2012. Following receipt of IRB approval, the Human Subjects Research Protocol package was prepared and submitted to the US Army Medical Research and Material Command Office of Research Protections. Approval to proceed with the Retrospective Study was received from the Office of Research Protections in May 2013.

**Literature Review:** A literature search was conducted that identified approximately 3000 articles and other documents of potential relevance to the study. The abstracts have been placed into an EndNotes data base, reviewed and classified on key terms. The abstracts were reviewed and copies of all pertinent articles and documents were obtained. Review of the literature began and a manuscript is being prepared.

**Retrospective Study:** NHRC began work to acquire, process, and prepare CHAMPS data for the approximately 1.9 million individuals who served on active duty in the US Army or US Marine Corps between 2000 and 2012. Work focused on demographic information, accession and discharge data, duty station and deployment data, changes in rank and status and UICs, as well as inpatient ICD-9 diagnostic and procedures codes. These data were acquired and processed by NHRC, stripped of identifiers, coded with random identifiers to allow the data files to be merged, and shipped to RTI as encrypted files on DVD.

The inpatient ICD-9 codes were reviewed and a coding schema to aggregate the 15,000 or so codes into 28 categories (12 injury categories, 15 mental health categories, and one residual category) was developed. SAS code to process the data was written and applied to the data set, and quality control checks are being performed. Because of the size of the data file, it takes hours for the programs to run. We are currently investigating means to improve our computing speed, as well as to assure that we have adequate storage space to work with the data files. The SAS programming has been shared with NHRC who will apply the program to the outpatient data, which is too large to share directly. Once the outpatient data has been recoded by NHRC, the data will be deidentified and shared with RTI.

NHRC began the process of making applications to DMDC and other agencies to obtain DIBRS, PDHA, and other datasets. Work continues on the various approval processes, but we anticipate acquiring these data early in year 2. RTI is continuing to negotiate for access to the HRB data. Our initial request was turned down, but we have followed up with additional information.

**Prospective Study:** Work on the prospective study focused on outreach to the bases that have been selected for this component of the study and preparation of the survey instrument. We developed explanatory materials for the outreach effort and also requested and received a letter of support from TATRC to use in these outreach efforts.

Good progress was made in developing the instrument for the survey of enlisted personnel. A number of measures and scales were identified and included in an initial draft. Members of the evaluation team have met to review, revise, and reduce the initial draft. Final work at assuring that adequate outcome measures are included in the instrument has begun.

### **Reportable Outcomes**

None to date.